

FIELD CHANGE REQUEST (FCR) FORM

Project Name: Arkema Project Area – PDI Phase 1

Project No.: CF167

Client: LSS/Retia USA

Request No.: FCR-02

To: Madi Novak, EPA Date: July 19, 2021

Field Change Request Title: Riverbank Soil Sample Collection Methods

Description:

The Arkema Project Area Pre-Design Investigation (PDI) Work Plan specifies that riverbank borings will be advanced using a hand auger. However, reconnaissance of the proposed riverbank soil sample locations between June 22 and July 9, 2021, visually revealed soil and fill material types that are not possible to sample using a hand auger at many of the locations. The riverbank area adjacent to the Arkema Project Area contains fill materials (rock, brick, concrete, etc.) and loose sand (see photos below of proposed soil sample locations RH-32 [upper left], RH-20 [upper right], and RH-40 [bottom]). Alternate sampling methods are needed to collect the riverbank soil samples.



Recommended Change:

The field crew will assess the soil and debris types present at the soil sampling locations and select the most appropriate method for collecting the riverbank soil samples at each sampling location. The sampling methods that may be used include the following:

1. Hand auger (as described in the PDI Work Plan)
2. Impact corer system. The impact corer system will be used in loose/sandy to slightly rocky soils that are not suitable for a hand auger. This system was developed by Gravity Consulting and has been used for a number of riverbank soil sampling projects, including the RM11E Project Area.

Lexan core tube liners will be placed inside a stainless steel core barrel with coring fingers at the bottom of the core barrel to retain the soil. The core barrel assembly will be advanced using an impact driver (modified jackhammer) or a fence post driver. Once the core barrel is advanced to the target depth, the driver will be removed, approximately 6 oz of deionized or distilled water will be added to the core barrel, and a cap will be placed on the top of the barrel to provide suction to retain the soil sample. Care will be taken to minimize the potential to leach chlorobenzene from the soil. It is anticipated that 6 oz of water will saturate approximately 6 in. of the soil, assuming a 3-in.-diameter core tube and soil with an effective porosity of 25 percent. The core barrel will be manually pulled from the ground. The Lexan tube will be removed from the core barrel, and the soil will be processed. To further minimize any impact of chlorobenzene concentrations in soil, the discrete Terra Core sample for the 0- to 1-ft interval will be collected near the bottom of the interval where the soil is expected to be unaffected by the addition of water.

3. Post-hole digger. A post-hole digger will be used in rocky soils that cannot be effectively sampled using a hand auger or the impact corer system. Soil from each 1-ft depth interval will be placed directly into a decontaminated stainless steel mixing bowl and processed in accordance with the PDI Work Plan.

A combination of methods may be used for some of the borings. For example, the post-hole digger may be used to advance the boring in rocky soil from 0–1 ft below ground surface (bgs), and a hand auger may be used to advance the boring in cohesive soils with limited rocks from 1–4 ft bgs. Hand tools, such as shovels and pry bars, may also be used to relocate debris and rocks at the sample location to support sample collection.

Eron Dodak
Field Operations Lead (or designee)


Signature

July 19, 2021
Date

Approval:

Eron Dodak
Project Manager


Signature

July 19, 2021
Date

Madi Novak
EPA Remedial Project Manager

Signature

Date

Distribution:

LSS Project Coordinator

Integral Project Manager

Field Operations Lead

QA Officer

Project File

Other: